Data Gap and Location	*Initial Results*	*Figure No.*	*Area No.*	*No. & Type of Proposed Investigative Locations*	*Proposed Analysis*	*Proposed Depth of Investigation*	*Rationale*
TT-21 / MW-229	TCE was detected at a concentration of 70 µg/L in a GW sample collected from MW-229 at a well screen depth of 22 – 32 ft bgs (straddling the water table). The TCE concentration was greater than the USEPA MCL of 5 µg/L. TT-21 soil concentrations of VOCs were greater than non-conservative USEPA soil screening levels (SSLs) for GW protection. A sample collected from material in a drum excavated at TT-21 (7 ft bgs) contained benzene, PCBs, lead, and naphthalene at concentrations greater than SSLs for groundwater protection, and USEPA Industrial Soil Regional Screening Levels (RSLs).	1	1	11 Geoprobe Boreholes	VOC GW analysis at each location Metals, PCBs and naphthalene GW analyses at 25% of locations VOC soil samples from all boreholes. PCB soil samples from 2 boreholes in vicinity of TT-21	To a minimum of 5 feet below the water table. CRA will attempt to extend a subset of boreholes (i.e. 1 in 4) deeper to the top of till layer (where present) or a depth of approx. 675 ft AMSL / 60 ft bgs to identify groundwater contamination source areas and the limits of waste in the area	Investigate the presence of TCE groundwater contamination in the vicinity and upgradient of MW-229. Investigate the extent of potential soil and groundwater PCB contamination from drum contents excavated from TT-21 (7 ft bgs).

GP18-09 / TT-22	The soil concentration of ethylbenzene collected from TT-22 (6 ft bgs) was greater than USEPA Industrial Soil criteria Concentrations of benzene, ethylbenzene, and vinyl chloride (VC) in soil samples from TT-22 were greater than SSLs for GW protection GP18-09 soil gas sample contained methane at concentrations greater than the UEL, and benzene, naphthalene and VC that corresponded to excess cancer risks greater than 1 x 10^{-3}	1	2	5 Geoprobe boreholes	VOC GW samples VOC soil samples- from all boreholes	Soil samples will be collected from boreholes in the vicinity of TT-22 down to and including the deepest, unsaturated interval To a minimum of 5 feet below the water table. CRA will attempt to extend all 5 boreholes deeper to the top of till layer (where present) or a depth of approx. 675 ft AMSL / 60 ft bgs	Determine whether VOCs in soil have resulted in shallow groundwater contamination. Also determine whether groundwater contamination is a source of VOCs in soil vapor at GP18-09. Additional boreholes in area will provide further delineation.

GP19-09 / VAS-04	Residual LNAPL was observed at the GW interface zone. CRA has not observed free-phase LNAPL in the monitoring well MW-219 installed in the approximate center of the LNAPL area. The soil gas sample collected from GP19-09 contained vinyl chloride at a concentration that corresponds to an excess cancer risk of 1.07×10^{-4}	1	3	5 Geoprobe Boreholes Step out approx. 40 ft from any location where LNAPL is identified	Sudan IV dye test VOC, metals, TPH, and naphthalene GW analysis on the two boreholes located closest to the Site boundaries (i.e. north, and east) Measure NAPL, if any, in MW-219 Baildown Testing using a pump, Solubility Assessment No proposed soil sample collection	To a minimum of 5 feet below the water table.	Delineate the extent of residual LNAPL in the areas of BH04-09 and BH08-09. The LNAPL detected at BH04-09 and BH08-09 was of limited thickness and concentration as in samples collected from BH02-09 and BH07-09 (based on qualitative Sudan IV dye tests only), indicating that CRA advanced BH04-09 and BH08-09 near the boundaries of the plume. Determine if residual LNAPL is bound to soil and not present as a separate phase liquid on the groundwater surface. NAPL is a principal threat waste. Determine if contaminants from the residual LNAPL is migrating off-Site towards the Great Miami River.

GP20-09 / TT-23	Chlorinated solvents were detected in the soil gas sample collected from GP20-09 at concentrations that correspond to excess cancer risks greater than 1×10^{-4}. A groundwater source has not been identified to date.	1	4	6 Geoprobe Boreholes	VOC GW samples VOC soil samples from all boreholes	To a minimum of 5 feet below the water table. CRA will attempt to extend 1 borehole deeper to the top of till layer (where present) or a depth of approx. 675 ft AMSL / 60 ft bgs	Investigate the possibility that a source of chlorinated solvents may be present in the vicinity of GP20-09 and TT-23.
GP15-09 / VAS-08 / TT-9	Ethylbenzene soil concentrations in samples from TT-9 (22 ft bgs) were greater than USEPA Industrial Soil criteria. Concentrations of benzene, cis-1,2-dichloroethene, ethylbenzene, TCE, and VC in soil samples collected from TT-9 were greater than SSLs for GW protection The soil vapor sample from GP15-09 contained concentrations of cis-1,2-DCE, which correspond to a non-cancer hazard index of 122, and TCE and VC, which correspond to excess cancer risks greater than 1×10^{-3} VOC concentrations in groundwater samples collected from VAS-08 were greater than	1	5	18 Geoprobe Boreholes	VOC and PCB GW samples VOC soil samples from all boreholes, and PCB soil samples from 1 in every 4 locations -	To a minimum of 5 feet below the water table. CRA will attempt to extend a subset of boreholes (i.e. 1 in 4) deeper to the top of till layer (where present) or a depth of approx. 675 ft AMSL / 60 ft bgs	Determine the possibility of additional sources of VOCs in the vicinity of GP15-09, VAS0-8, and TT-9 to provide additional delineation. Determine whether the source is a principal threat waste and a hot spot requiring remediation; an area that while not a hot spot is amenable to remediation; or an area requiring containment.

	USEPA MCL RSLs						
GP13-09 / VAS-09	Chlorinated solvent GW concentrations in samples collected from VAS-09 (27 – 32 ft bgs) were greater than USEPA MCL RSLs. MW-215A /B were installed approx. 6.5 ft away from VAS-09. GW results for MW-215A/B did not correspond with VAS-09 results. The soil gas sample collected from GP13-09 contained vinyl chloride at a concentration that corresponds to an excess cancer risk greater than 1 x 10^{-3} Drum contents were reportedly dumped in an area southwest of TT-10, based on information from the Edward Grillot 2012 deposition	1	6	15 Geoprobe Boreholes	VOC GW analysis at each location Metals and naphthalene GW analyses on every 1 in 4 locations VOC soil samples from all boreholes	To a minimum of 5 feet below the water table. CRA will attempt to extend a subset of boreholes (i.e. 1 in 4) deeper to the top of till layer (where present) or a depth of approx. 675 ft AMSL / 56 ft bgs	Determine the possibility of a source of chlorinated VOCs in the vicinity of GP13-09 and VAS-09. Determine whether the source is a principal threat waste and a hot spot requiring remediation; an area that, while not a hot spot, is amenable to remediation; or an area requiring containment. Additional boreholes in vicinity may also aid in delineation and serve to investigate information regarding disposal of drum contents.
MW-210	TCE concentrations in groundwater samples have been consistently greater than the USEPA Maximum Contaminant Level (MCL). The maximum TCE concentration measured was 260 µg/L; the MCL is 5 µg/L.	2	NA	29 Geoprobe boreholes Upgradient boreholes will be completed first and samples will be submitted on a rush TAT	VOC GW analysis at each location Metals and naphthalene GW analyses on every 1 in 4 locations	To a minimum of 5 feet below the water table. CRA will attempt to extend a subset of boreholes (i.e. 1 in 4) deeper to the top of till layer (where present) or a depth of approx. 675 ft	• Determine whether TCE contamination in the Upper Aquifer Zone is migrating off-Site. • Determine if TCE concentrations are greater upgradient of MW-210, based on the predominant GW flow direction in this area of the Site from NE to SW. • Determine whether VOC contamination from on-Site sources is migrating off-Site in shallow groundwater in

						AMSL / 60 ft bgs	area of nearest potential off-Site receptors.
Magnetic Geophysical Anomalies	Total field magnetic anomalies were identified on Parcels 5171 and 5177	3	NA	6 Test Trenches	No sample collection proposed	Depth to the water table, if possible and feasible (as limited by the ability of the excavator to reach that depth, the stability of the walls of the excavation, and/or presence of obstructions). The test trenches may extend to approx 30 ft long by 3 ft wide.	Investigate four total field magnetic anomalies identified at the Site. The anomalies may be associated with disposal of small metallic objectives that were observed on and immediately below the ground surface (i.e., automotive brake drums, brake pads, other small car parts). Investigation is required to eliminate possibility that anomalies are due to buried drums or tanks which could be a potential source of ongoing contamination.

EM Geophysical Anomalies	TT-21 geophysical anomaly was identified in the approximate area of the drum removal that occurred in 2000. In 2008, a buried drum was excavated from TT-21.	3	NA	1 Trench	No sample collection proposed; however, soil samples may be collected for VOC or other analysis if field screening indicates the possibility of soil contamination that could represent a hot spot.	Depth to the water table, if possible and feasible (as limited by the ability of the excavator to reach that depth, the stability of the walls of the excavation, and/or presence of obstructions). The test trench may extend to approx 30 ft long by 3 ft wide.	Investigate geophysical anomaly identified in the area of TT-21, which may be indicative of buried drum(s). Characterize the contents of any excavated drum. If hazardous, properly dispose of the drum off-Site.
TP-3	Chlorobenzene soil concentration of 560 mg/kg, in sample collected at 16 ft bgs, which is greater than the soil screening value for GW protection, based on a cancer risk of 1×10^{-4} and a dilution attenuation factor of 10.	3	NA	4 Geoprobe Boreholes	VOC soil and GW analysis.	To top of till layer (where present) or a depth of approx. 675 ft AMSL / 50 ft bgs	• There is a potential risk of chlorobenzene leaching from soil to groundwater. The proposed Geoprobe boreholes are intended to investigate this potential pathway. • Investigate vertical and lateral extent of chlorobenzene soil contamination near TP-3.

Large and Small Ponds	NA	NA	NA	NA	Wetland Survey	NA	• Determine if the Large and Small Ponds are classified as category wetlands. • Determine appropriate jurisdictional authority over the wetlands (if categorized): Ohio EPA or Army Corps of Engineers. • Determine applicable state or federal permits or remedial requirements, if the Site has classified wetlands areas. • Determine degree of offset (i.e., size and category) wetland required if site wetlands are destroyed during remediation activities, in accordance with Section 404 of the Clean Water Act, or Ohio Administrative Code 3745-54.